

Serial No. 09/936,794

BEST AVAILABLE COPY

IN THE CLAIMS:

1. (Cancelled)

2. (Currently amended) A process according to claim 214 wherein the touch dry primer coating is sprayed with the film strengthening solution.

3. (Cancelled)

4. (Currently amended) A process according to claim 4-21 wherein the binder comprises an aqueous solution stabilized by a silicate substituted by at least one anionic group of lower pKa than silicic acid, having a pH of 7 to 10.5 prepared by lowering the pH of a solution of silicate and silicate by ion exchange.

5. (Currently amended) A process according to claim 4-21 wherein the primer coating further comprises zinc powder and/or a zinc alloy.

6. (Currently amended) A process according to claim 4-21 wherein the primer coating further comprises an organic resin.

7. (Currently amended) A process according to claim 4-21 wherein all components of the coating composition are added and thoroughly mixed shortly before application.

8. (Currently amended) A process according to claim 421 wherein the touch dry primer coating is treated with a solution of a silicate or alkoxysilane.

9. (Currently amended) A process according to claim 214 wherein the solution is applied to the touch dry primer coated steel at 0.005-0.2 liters per square meter primer coated surface.

P:\Parker\ACOVACO 2624 RCE2 amd.doc

2

Serial No. 09/936,794

10. (Currently amended) A process according to claim 421 wherein the touch dry primer coating is treated with an aqueous solution of an inorganic salt of concentration at least 0.01M.

11. (Currently amended) A process according to claim 421 wherein the primer coating of the steel, drying of the primer coating until it is touch dry and application of the treatment solution are carried out successively in an on-line process.

12. (Currently amended) A process according to claim 421 wherein the primer coating is dried at a temperature of 10 - 60°C in a forced air flow.

13. (Currently amended) A method of using an aqueous solution of an inorganic salt of concentration at least 0.01M as a spray treatment of steel primer coated with a primer coating comprising an aqueous silica sol binder having a particle size in the range 3 to 100nm and a SiO₂/M₂O mole ratio, where M represents total alkali metal and ammonium ions, of at least 625:1.

14. (Currently amended) A method of using a silicate, ~~an~~ an alkoxysilane or an acyloxysilane solution as a spray treatment of steel primer coated with a primer coating comprising an aqueous silica sol binder having a particle size in the range 3 to 100nm and a SiO₂/M₂O mole ratio, where M represents total alkali metal and ammonium ions, of at least 625:1.

15. (Currently amended) A process according to claim 421 wherein the binder further comprises an alkali metal silicate.

16. (Previously presented) A method according to claim 13 wherein the binder further comprises an alkali metal silicate.

P:\Parker\ACOVACO 2894 RCE2 amd.doc

3

Serial No. 09/936,794

17. (Previously presented) A method according to claim 14 wherein the binder further comprises an alkali metal silicate.

18. (Previously presented) A process for primer coating of steel comprising:

coating the steel with a primer coating comprising a silica binder and zinc powder and/or a zinc alloy, wherein the binder comprises an aqueous silica sol having a particle size in the range 3 to 100 nm and having a $\text{SiO}_2/\text{M}_2\text{O}$ mole ratio, where M represents total alkali metal and ammonium ions, of at least 25:1; and

after the primer coating has dried to the extent that it is touch dry, treating it with a film strengthening solution.

19. (Previously presented) A process for primer coating of steel comprising:

coating the steel with a primer coating comprising a silica binder and zinc powder and/or a zinc alloy, wherein the binder comprises an aqueous silica sol having a particle size in the range 3 to 100 nm and having a $\text{SiO}_2/\text{M}_2\text{O}$ mole ratio, where M represents total alkali metal and ammonium ions, of at least 25:1; and

spraying an aqueous solution of an inorganic salt having a concentration of at least 0.01M on the steel coated with the primer coating.

20. (Previously presented) A process for primer coating of steel comprising:

coating the steel with a primer coating comprising a silica binder and zinc powder and/or a zinc alloy, wherein the binder comprises an aqueous silica sol having a particle size in the range 3 to 100 nm and having a $\text{SiO}_2/\text{M}_2\text{O}$ mole ratio, where M represents total alkali metal and ammonium ions, of at least 25:1; and spraying a silicate or alkoxysilane solution on the steel coated with the primer coating.

21. (New) A process for primer coating of steel comprising:

Serial No. 09/936,764

coating the steel with a primer coating comprising a silica binder, wherein the binder comprises an aqueous silica sol having a particle size in the range 3 to 100 nm and having a $\text{SiO}_2/\text{M}_2\text{O}$ mole ratio, where M represents total alkali metal and ammonium ions, of at least 25:1; and

after the primer coating has dried to the extent that it is touch dry, treating it with a film strengthening solution.